UNITED STATES PATENT OFFICE.

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MACHINE FOR CUTTING GREEN CORN FROM THE COB.

SPECIFICATION forming part of Letters Patent No. 295,831, dated March 25, 1884.

Application filed December 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, DARIUS B. SPEER, a citizen of the United States, residing at Blue Grass, in the county of Scott and State of Iowa, have invented a new and useful Machine for Cutting Green Corn from the Cob, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to machines for cutting green corn from the cob for canning and and other purposes; and its object is to provide a machine of this class possessing superior advantages in point of simplicity, inexpensiveness, durability, and general efficiency.

In the drawings, Figure 1 is a side elevation of a machine embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a detail transverse sectional view through the hopper, taken on the line *y y*, Fig. 1. Fig. 4 is a detail sectional view taken through the driving-rod of the feed-rolls, the lever-block, and the safety-pin on the line *x x*, Fig. 3. Fig. 5 is a rear end view of the machine. Fig. 6 is a detail longitudinal sectional view taken through one of the knife-arms. Fig. 7 is a detail transverse sectional view taken through one of the scrapers. Fig. 8 is a detail transverse sectional view taken through one of the guards. Fig. 9 is a detail perspective view, partly broken away, illustrating the plunger-rod and plunger-head.

Referring to the drawings, A designates a suitable bed-plate or table, which is preferably mounted upon legs B, and is provided at its front end with bearings C C, for a transverse crank-shaft, D, having a band-wheel, E, or other means for communicating motion to the shaft. The crank-shaft is connected by a pitman, F, with a cross-head, G, sliding between guides H H, disposed longitudinally on the table A, which cross-head carries a plunger-rod, I, having a sleeve, J, forming the plunger-head. Around the plunger-rod, and between a shoulder, *i*, on the rod and an interior shoulder, *j*, on the sleeve J, is disposed a coiled spring, K, which acts against the sleeve to retain it in its normal position at the rear end of the plunger-rod, the action of the spring being limited by heads or enlargements j', on the front ends of bars j^2 j^2, which pass through eyes *g* in lugs *g'* on the cross-head and project forwardly from an annular lateral flange, j^3, at the front end of the collar J. This plunger and plunger-head pass through a corresponding opening, *l*, in a suitable frame, L, which projects from table A at the front end of the hopper Q, and the operation of the plunger is as follows: On its rear stroke the plunger-head forces the ear of corn from the hopper to the cutting-knives, when the flange j^3 engages the front face of the frame L and holds the collar or plunger-head against the tension of the spring K to prevent the plunger-head from going between the knives. Thus the plunger-head is retained stationary while the plunger-rod continues the rearward stroke to force the ear from between the knives to the scrapers beyond; but as soon as the forward stroke of the plunger-rod begins the tension of the spring returns the plunger-head to its normal position.

M is a suitable frame, projecting upward from the table A at the rear of the hopper, and provided with an opening, *m*, registering with the opening *l*, and likewise adapted for the passage of the plunger. Between these plates or frames L and M are journaled two approximately semicircular feed-rolls, N and O, arranged, respectively, one above the other, and each provided with two longitudinal parallel semicircular grooves, *n n o o*, in their adjoining faces, as shown. These rolls are connected by an endless encircling belt, P, which is secured to the rolls by pins or screws *p p*, so that the said rolls will positively move together. At each side of the rolls is arranged an inclined feed-board, Q, which form the hopper, the feed from this form of hopper being very rapid, as the bottom feed-roll alternately takes the corn from each side. The rolls simply rock upon their pivots, and the groove in the down side of the bottom roll receives an ear of corn and carries it up to the plane of the openings *l* and *m* as the top roll turns far enough to catch the ear, which latter is thus held between the corresponding grooves of the two rolls, as shown in Fig. 3, until the plunger forces it through the opening *m* onto the knives. The operation of the rolls is effected by two cross-levers, R R, which are pivoted to the under roll and to the ends of a lever-block, S,